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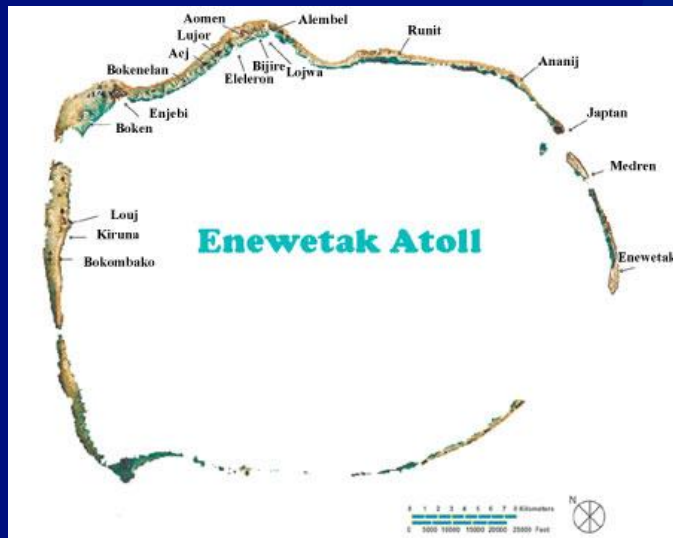


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Brown/Eniwetok/Enewetak The Pacific Proving Ground

Roger Meade
C-NR

May 2022

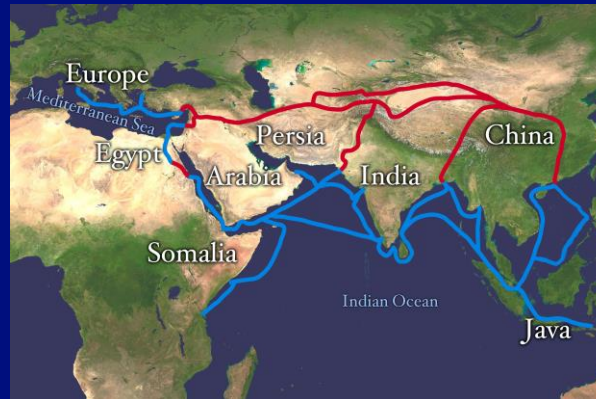




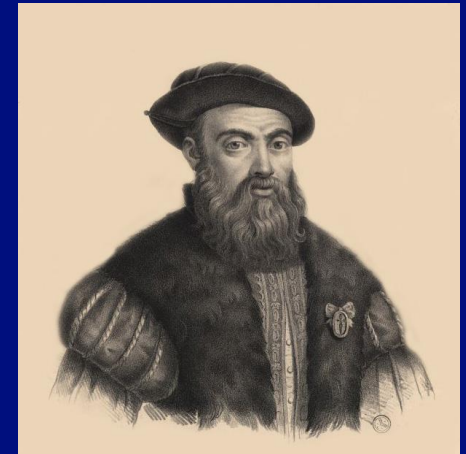
The Road to the Pacific Proving Ground

The Spices of Life

- In 410 AD, when the Visigoths captured Rome, they demanded 3,000 pounds of peppercorns as ransom.
- Nutmeg was once worth more by weight than gold.
- In the 16th century, London dockworkers were paid their bonuses in cloves.
- The spice trade was once the world's biggest industry: it established and destroyed empires, led to the discovery of new continents, and in many ways helped lay the foundation for the modern world.



Silk and Spice Roads



Ferdinand Magellan
1519

European Discovery



Alonzo de Ceron

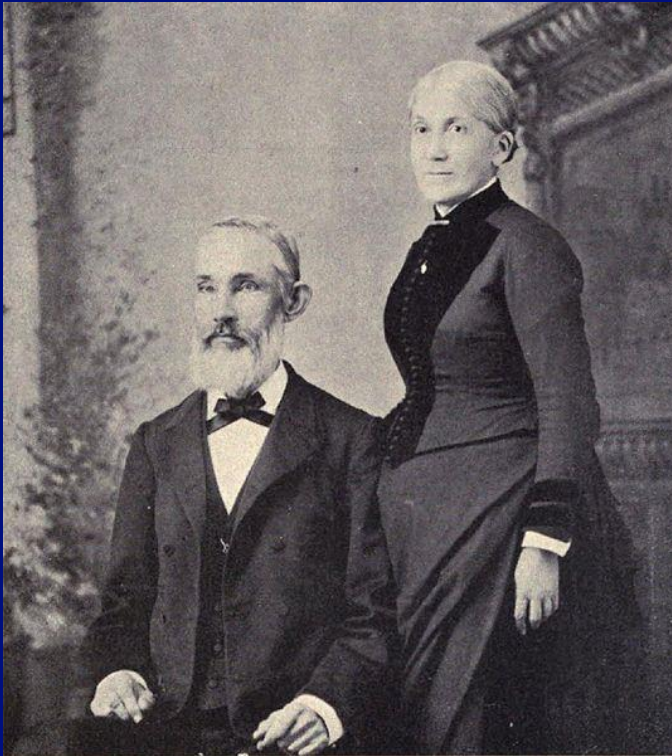
- 1529: Accidentally discovered by Alonzo de Ceron.

“The islands had no spices or gold and the souls too few to convert to the true faith. With their treacherous shoals and reefs, they were regarded as “nothing more than navigational hazards that were best avoided. Having no value, Spain even neglected to provide the islands with an identity.”

- 1788: The Marshall Islands are given their European name - after British ship captain John Marshall. Native name is *jolet jen Anij* (gifts from God).
- Enewetak is initially called Brown's range after a British factor. A name that persisted until World War II.

The Road to the Pacific Test Site

Missionaries



1856: American Board of Commissioners for Foreign Missions

Through missionary efforts, the Marshallese quickly learned English, achieving a literacy level well above eighty per cent of the population. In all things Christian, the Marshallese, proved an ideal population for the efforts of the ABCFM becoming in just fifteen years a self-supporting Christian population viewed by the American Board as “a miracle of grace.”

Germany



Kaiser Wilhelm II

- 1861: German traders arrive.
- 1885: Germany occupies the islands with the collusion of Britain and the Pope Leo XIII.
- 1914: Germany abruptly leaves the Pacific.



“the servants of God and mammon were prophets of progress, each yard of calico sold was another step along the road toward civilization. Traders realized a profit and missionaries a chaste dress code.”

Japan

- 1914: Japan occupies the Islands.
- 1919: Becomes a League of Nations Mandate.

The League of Nations assumed legal title to the Marshall Islands as a Class C Mandate, meaning that it was a territory "owing to the sparseness of population or their small size, or their remoteness from the center of civilizations ... can best be governed under the laws of the Mandatory as integral portions of its territory."

- 1933: Japan quits the League of Nations – does not return its Mandate

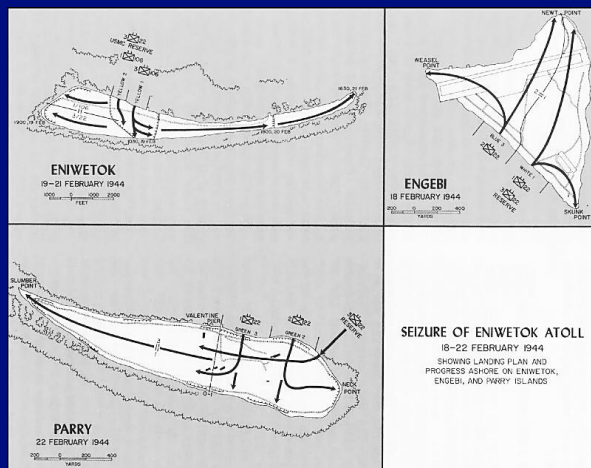


Emperor Hirohito



World War II

Battle for Eniwetok Atoll



- Engebi – February 18, 1944
- Eniwetok - February 18-19, 1944
- Parry (Medren): February 22, 1944



- 2,677 Japanese killed
- 64 Japanese prisoners
- 339 U.S. service personnel killed
- Eniwetok native casualties – unknown



RESTING ON ENIWETOK BEACH AFTER THE BATTLE.

MARINE CORPS PHOTO 9-13

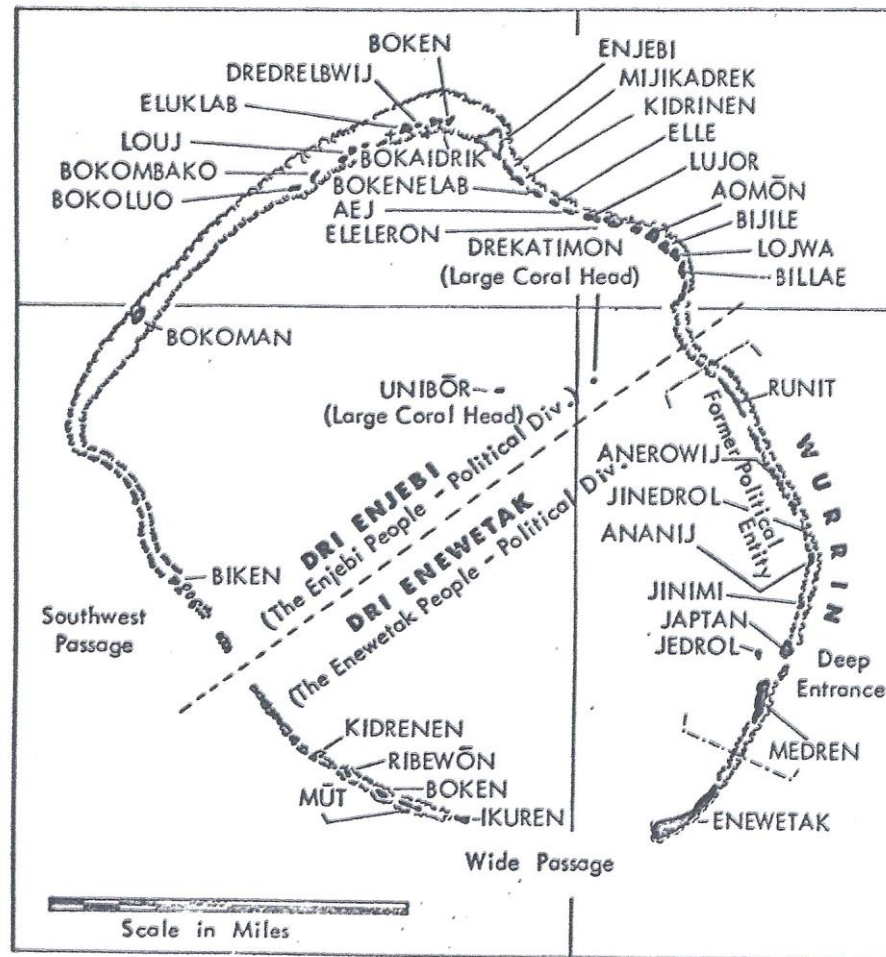
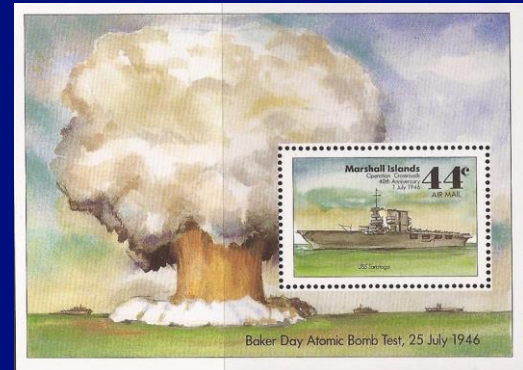
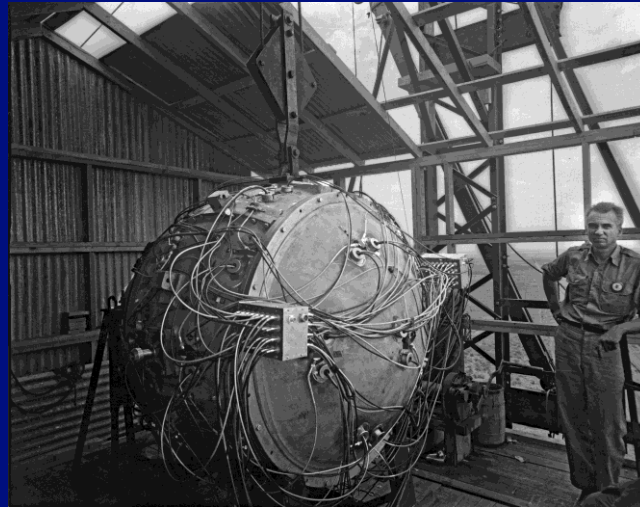


Figure 3. ENEWETAK ATOLL

Adapted from Street
(1960: 5)

The Road to the Pacific Proving Ground

Trinity and Crossroads



Imaged by Heritage Auctions, HA.com

A New International Order

Strategic Trusteeship

- Legal title to the Marshall Islands, still vested in the League of Nations, passes to United Nations.
- The United States could no longer claim the islands as “spoils of war.” The issue for the United States is how to retain control the Marshall Islands.
- The UN replaces *Mandates* with *Trusteeships*. The Marshall Islands Trusteeship is assigned to the U.S.
- The U.S. is successful in having the Marshall Islands designated a Strategic Trusteeship, giving the US complete and total control.

The Territory of the Pacific Islands, consisting of the islands formerly held by Japan under mandate in accordance with Article 22 of the Covenant of the League of Nations, is hereby designated as a strategic area and placed under the Trusteeship System established in the Charter of the United Nations.



Trusteeship Responsibilities

- The natives will be accorded all rights which are the normal constitutional rights of [U.S.] citizens.
- The displacement of the natives will be kept to a minimum. Any displacement would be effected by collaborative agreements.
- The AEC and the Secretary of Defense will not subject the natives to perceptibly greater danger than the peoples of the United States.

The Eniwetok people are moved to Ujelang Atoll in early 1948.

Robert Lovett: "relocating the Enewetakians was not significant since they were not even living on their home islands."

"Even the pigs and chickens cried when they were moved from Eniwetok."



Operation Sandstone

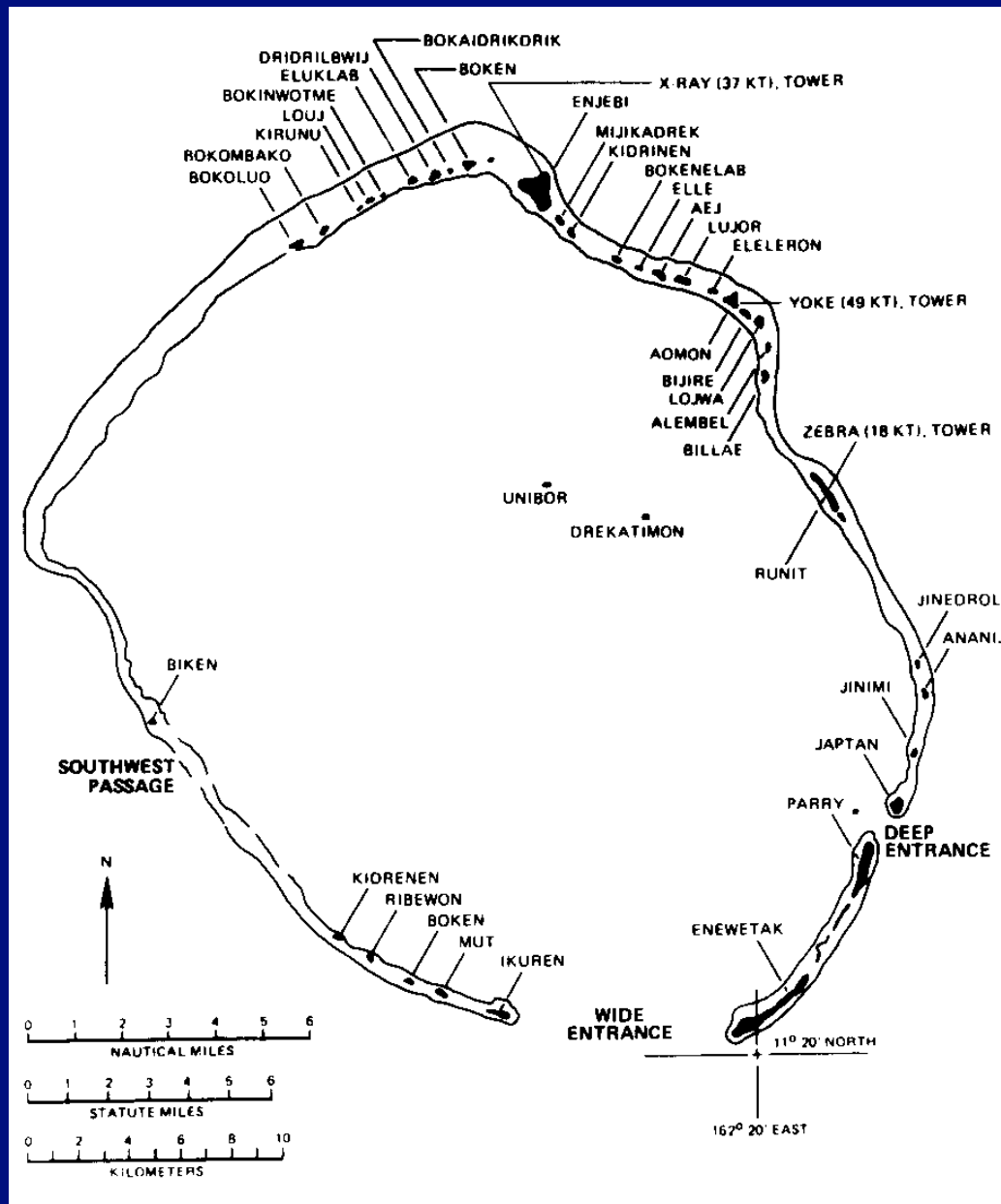
Enewetak Atoll, 1948

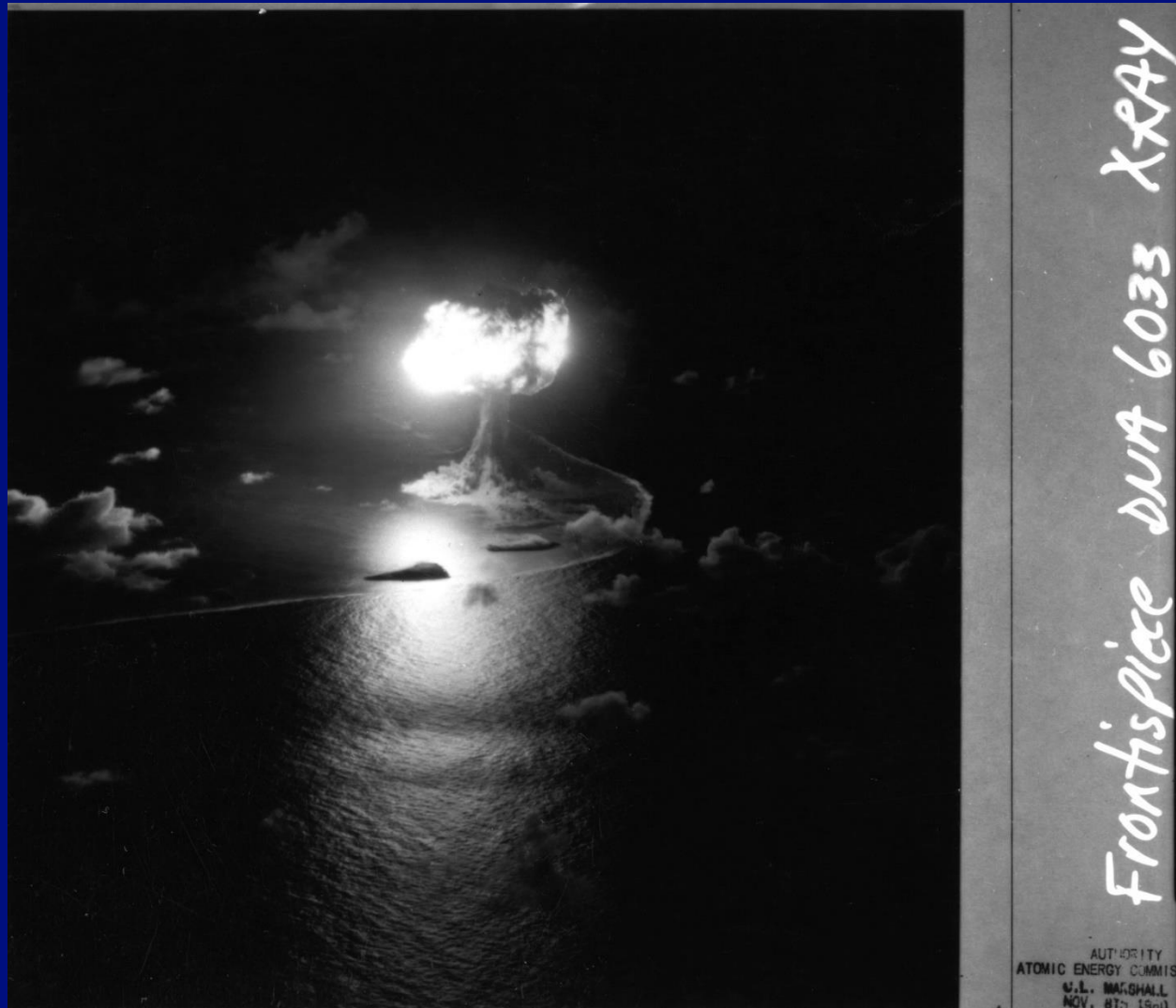
Test	Date	Island	Yield (kt)
X-Ray	04/15/1948	Engebi	37
Yoke	05/01/1948	Runit	49
Zebra	05/15/1948	Aoman-Bijiri	18



Darol Froman







Yoke

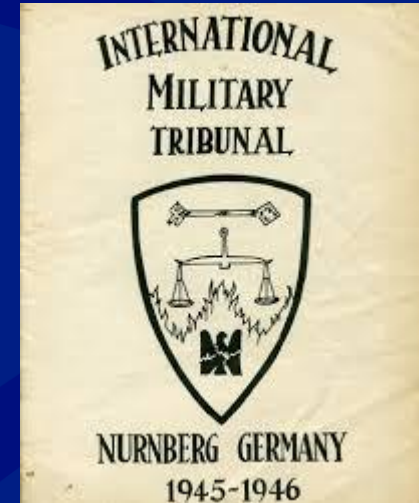
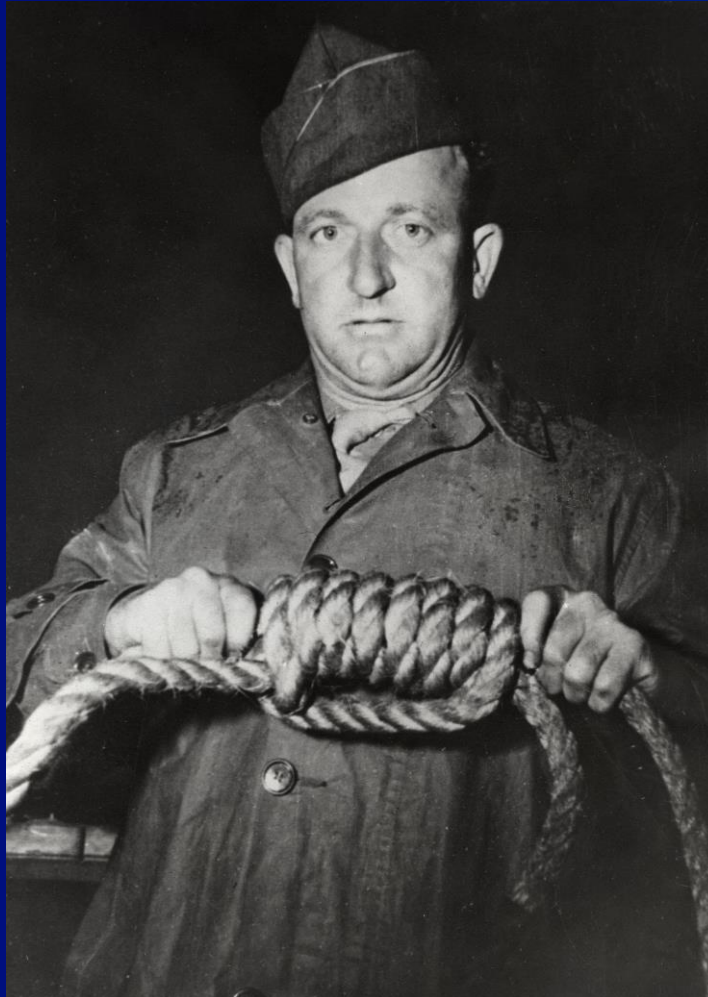


Zebra



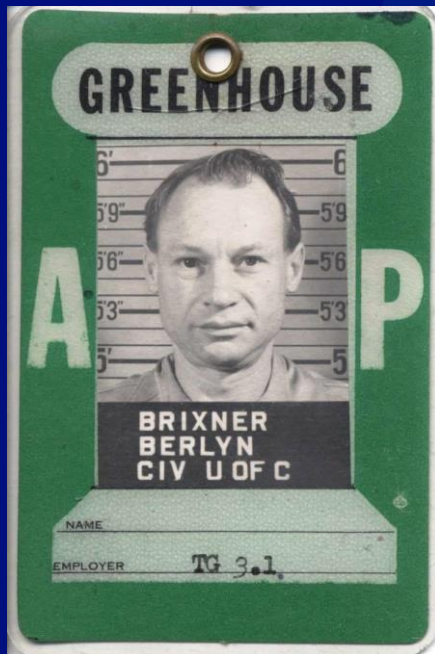
The Hangman

John Woods



Operation Greenhouse

Test Codename	Date	Shot Island	Yield (kt)
Dog	04/07/1951	Runit	81
Easy	04/20/1951	Engebi	47
George	05/8/1951	Engebi	225
Item	05/24/1951	Eberiru	45.5



George



The George shot, the design of which resulted from the crash program on the H-Bomb, confirmed that our understanding of the means of initiating a small-scale thermonuclear reaction was adequate." (Jay Wechsler)

Item

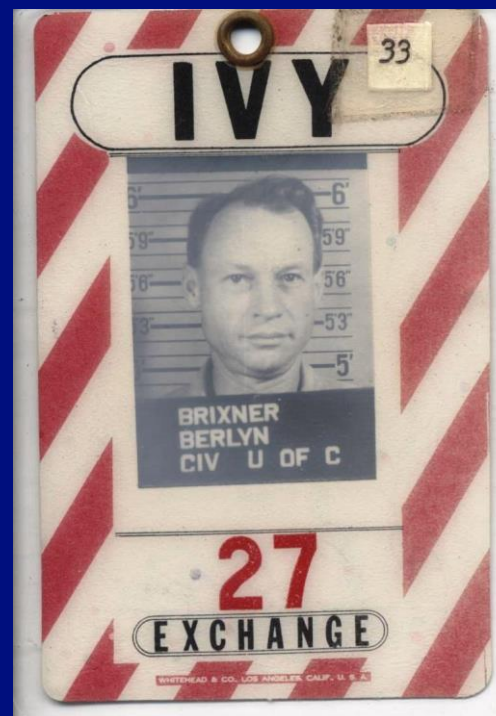


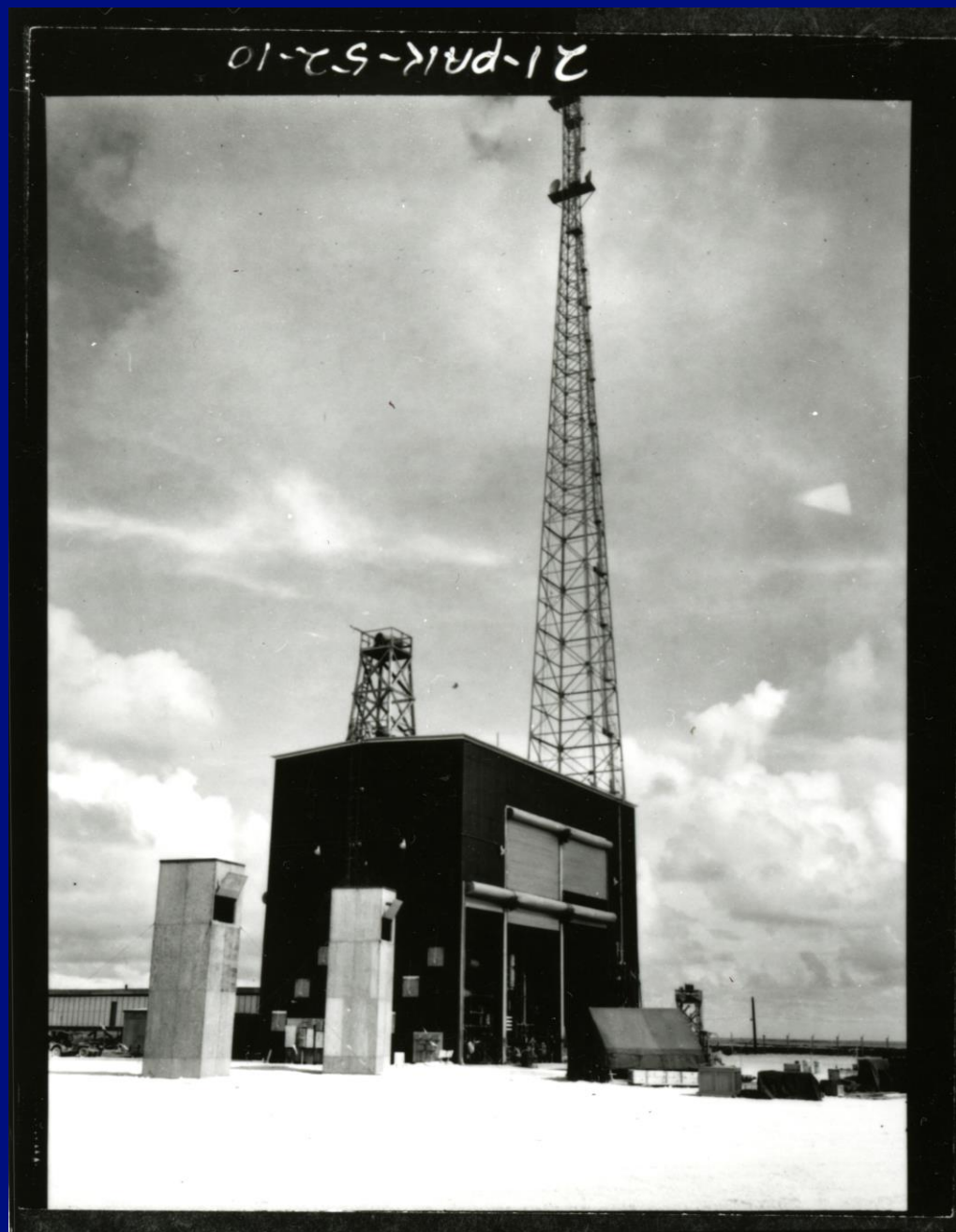
Boosting: the use of a fission bomb to initiate a small thermonuclear reaction that, in turn, increases the efficiency and use of the fissile material.

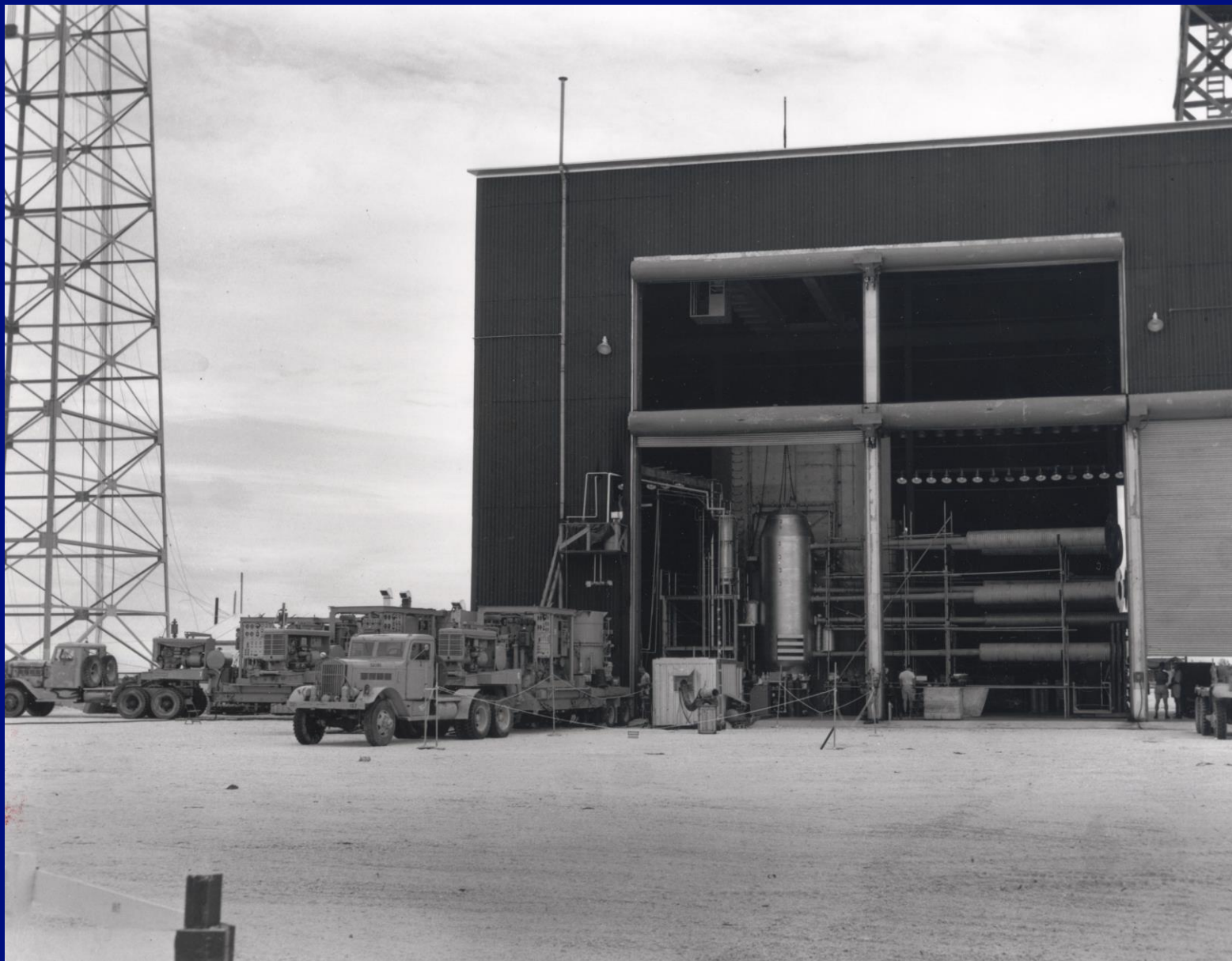
Of all the technical developments that led to the creation of the hydrogen bomb, the development of a fission device energetic enough to light a thermonuclear fire was underappreciated. (Hans Bethe)

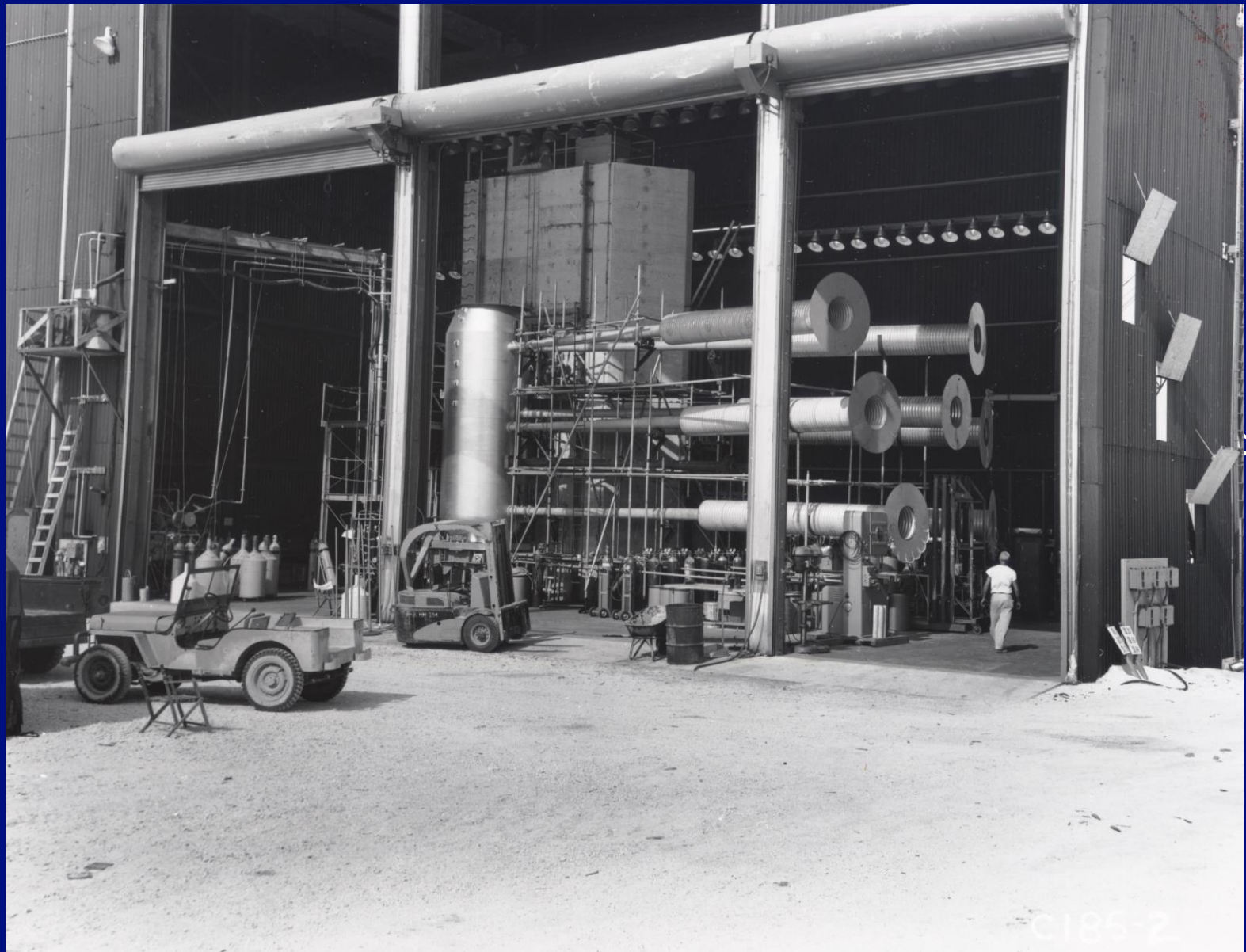
Operation Ivy

Test	Date	Island	Yield (kt)
Mike	10/31/1952	Elugelab	1, 400
King	11/15/1952	Runit	500











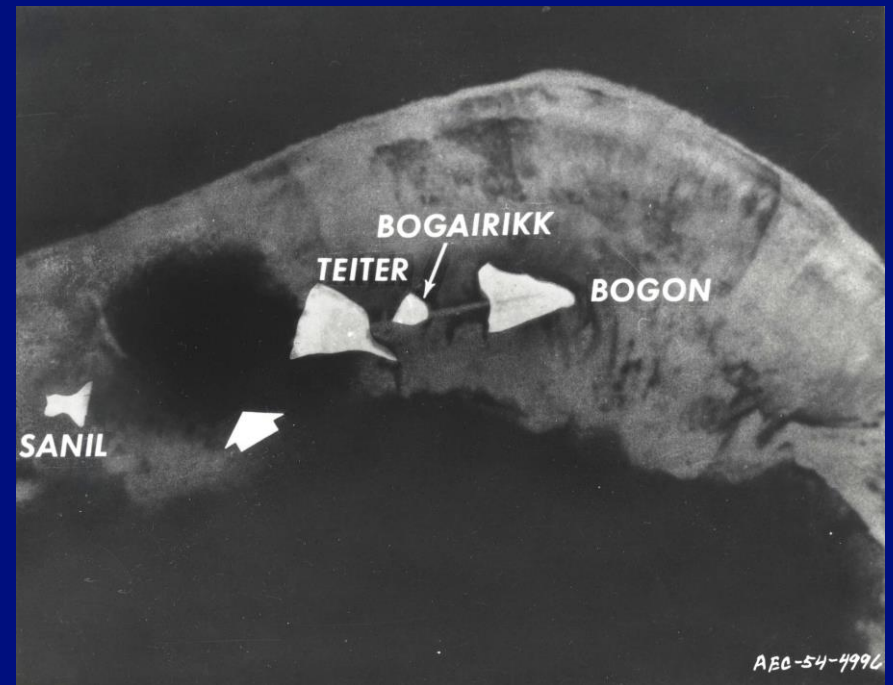
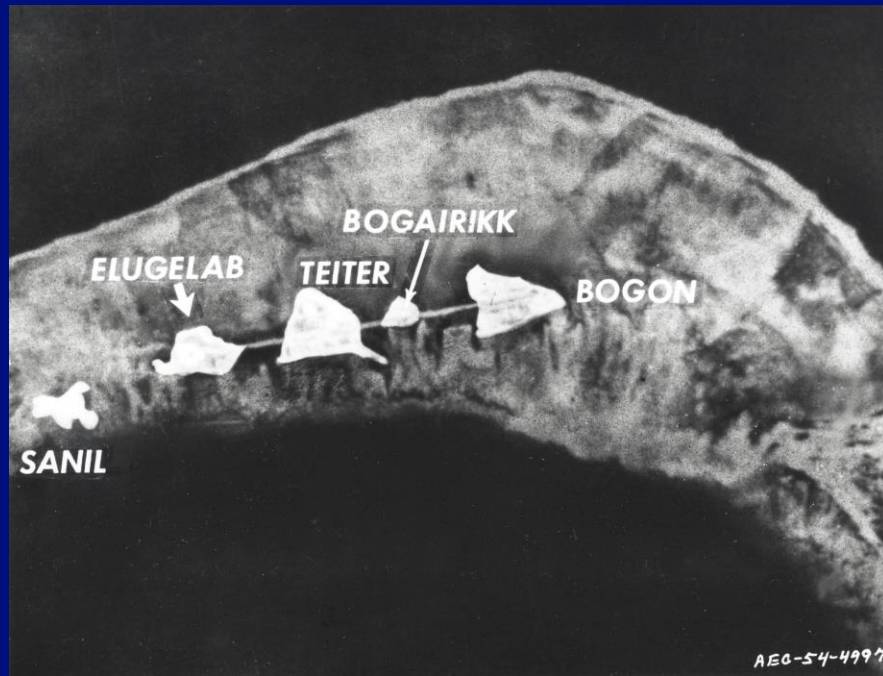






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An Island Goes Missing

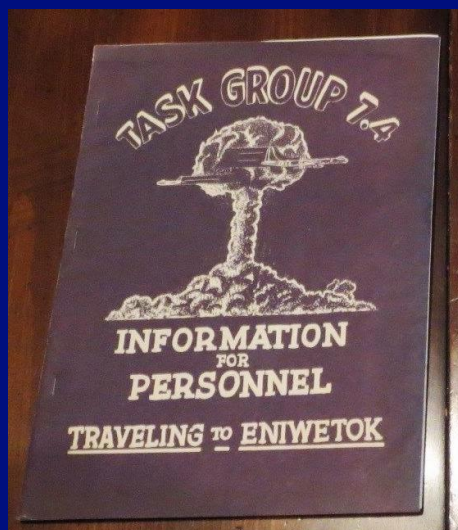




Operation Castle

An Expanded Pacific Proving Ground

Test	Date	Laboratory	Location	Venue	Yield
Bravo	02/28/1954	LASL	Bikini	Surface	15 Mt
Romeo	03/26/1954	LASL	Bikini	Barge	11Mt
Koon	04/06/1954	UCRL	Bikini	Surface	110 Kt
Union	04/25/1954	LASL	Bikini	Barge	6.9 Mt
Yankee	05/04/1954	LASL	Bikini	Barge	13.5 Mt
Nectar	05/13/1954	LASL	Eniwetak	Barge	1.69 Mt

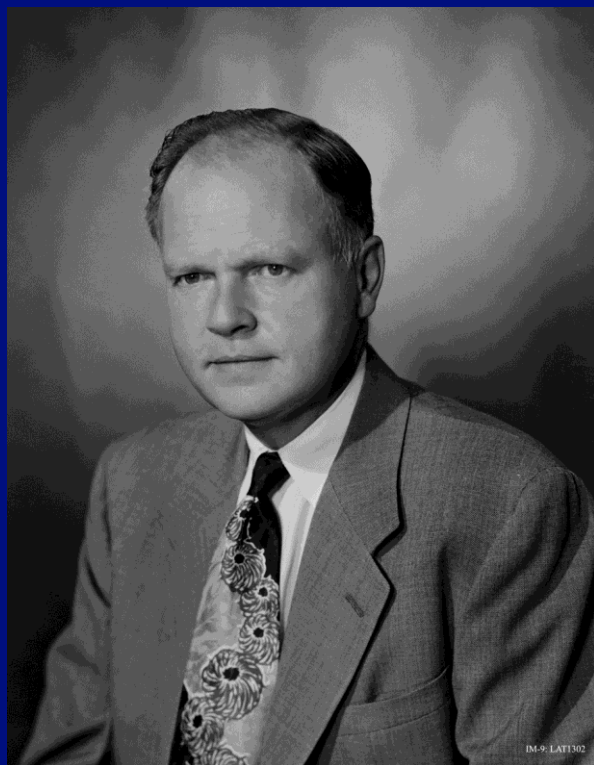








Castle Nectar
May 13, 1954 1.69 MT



Alvin Graves

“The theory of stratospheric trapping has not been substantiated by the facts of Bravo.”



... in view of the increasing danger from the experiments with deadly explosives thousands of times more powerful than anything previously known to men ... we, the Marshallese people feel that we must follow the dictates of our consciences to bring forth this urgent plea to the United Nations, which has pledged itself to safeguard the life, liberty and the general well-being of the people of the Trust Territory, of which the Marshallese are a part.

The General



*There is no great concern over evacuation as such here (Washington).
The only real propaganda made of such matters was when the Bikini
natives were moved to another island permanently.*

Operation Redwing

Eleven Shots

Test	Date	Laboratory	Venue	Yield
Lacrosse	05/04/1956	LASL	Surface	40 kt
Yuma	05/27/1956	UCRL	Tower	0.190 kt
Erie	05/30/1956	LASL	Tower	14.9 kt
Seminole	06/06/1956	LASL	Surface	13.7 kt
Blackfoot	06/11/1956	LASL	Tower	8 kt
Kickapoo	06/13/1956	UCRL	Tower	1.49 kt
Osage	06/16/1956	LASL	Airdrop	1.7 kt
Inca	06/21/1956	UCRL	Tower	15.2 kt
Mohawk	07/02/1956	UCRL	Tower	360 kt
Apache	07/08/1956	UCRL	Barge	1.85 Mt
Huron	07/21/1956	LASL	Barge	250 kt

Seminole



Seminole



Seminole

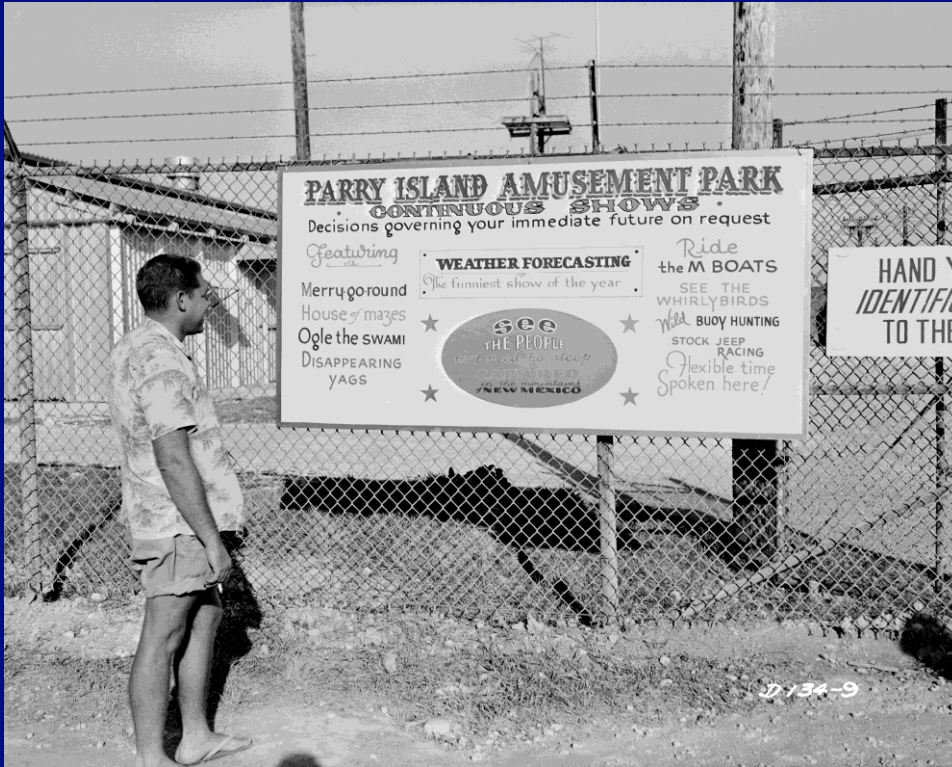


Hardtack I

Twenty-two Shots

Event	Date	Laboratory	Venue	Yield
Butternut	05/11/1958	LASL	Barge	81 kt
Koa	05/12/1958	LASL	Surface	1.37 Mt
Wahoo	05/16/1958	LASL	Underwater	9 kt
Holly	05/20/1958	LASL	Barge	5.9 kt
Yellowwood	05/26/1958	LASL	Barge	330 kt
Magnolia	05/26/1958	LASL	Barge	57 kt
Tobacco	05/30/1958	LASL	Barge	11.6 kt
Rose	06/02/1958	LASL	Barge	15 kt
Umbrella	06/08/1958	LASL	Underwater	8 kt
Cactus	05/05/1958	LASL	Surface	18 kt
Walnut	06/14/1958	LASL	Barge	1.45 Mt
Linden	06/18/1958	LASL	Barge	11 kt
Elder	06/27/1958	LASL	Barge	880 kt
Oak	06/28/1958	LASL	Barge	8.9 Mt
Sequoia	07/01/1958	LASL	Barge	5.2 kt
Dogwood	07/05/1958	UCRL	Barge	397 kt
Scaevola	07/14/1958	LASL	Barge	0
Pisonia	07/17/1958	LASL	Barge	255 kt
Olive	07/22/1958	UCRL	Barge	202 kt
Pine	07/26/1958	UCRL	Barge	2 MT
Quince	08/06/1958	UCRL	Surface	0
Fig	08/18/1958	UCRL	Surface	20 tons

Parry Island



One evening over gin and tonic ... and not much tonic ... Bob Campbell and couple of LASL scientists dreamed up the idea of the sign as a joke

....



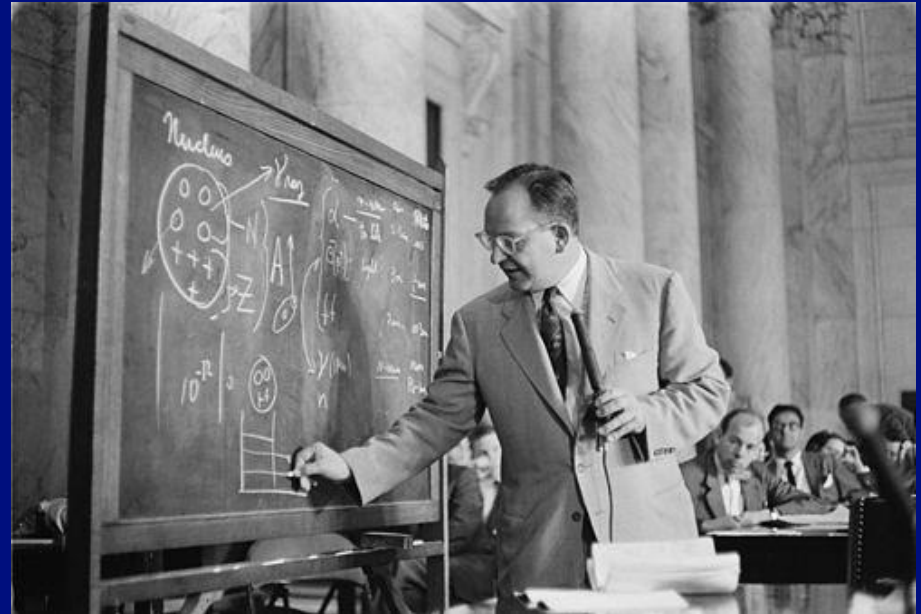
... it was easy to get a decision governing your immediate future on request:

(Q) Can I go home? (A) Yes.

(Q) When? (A) When we're finished.

Oak

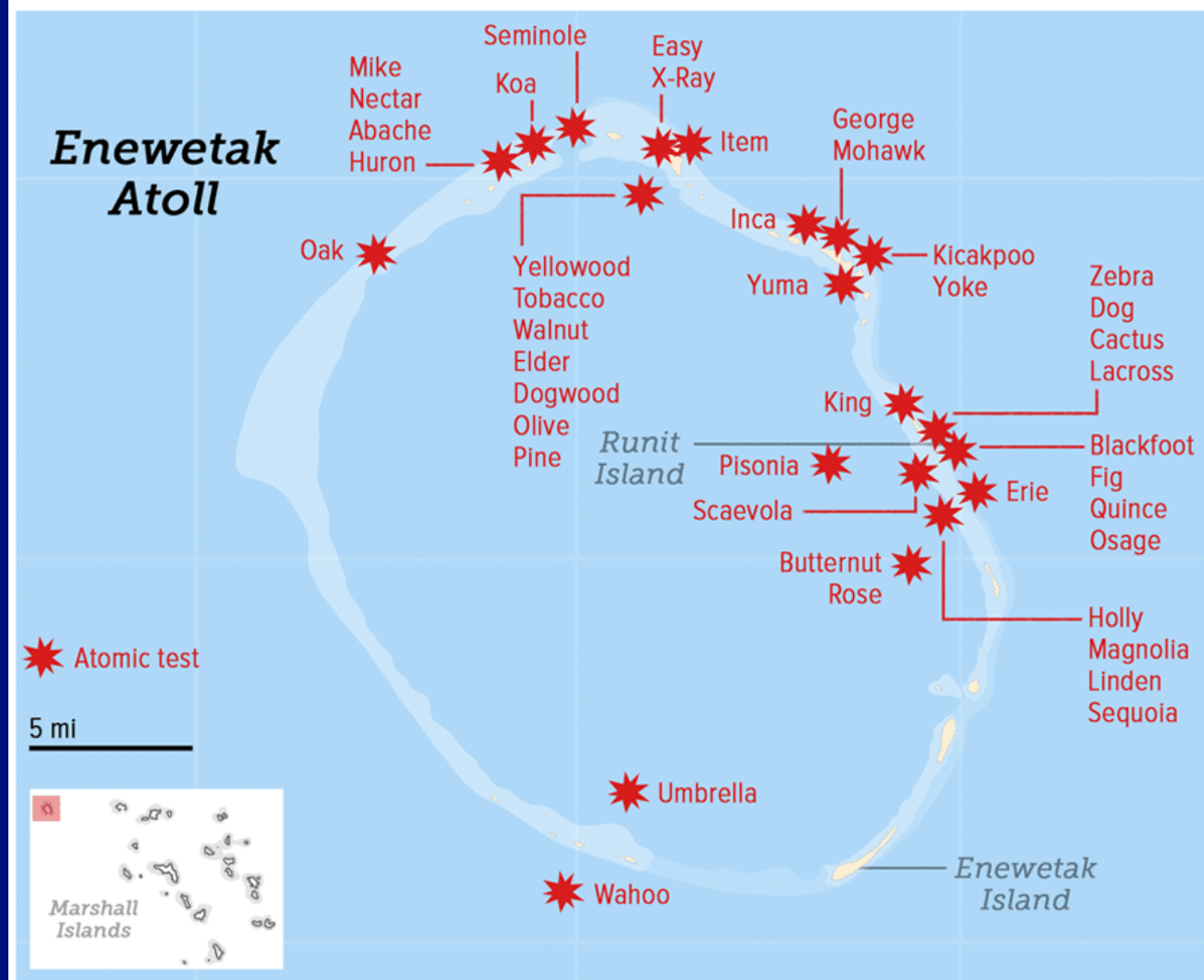




April 7, 1958: Mark M. Mills, deputy director of the University of California's Livermore Laboratory, died in a helicopter crash at the Eniwetok Proving Ground.

Atomic tests on Enewetak Atoll

The United States detonated a total of 67 atomic bombs on the Bikini and Enewetak atolls between 1946 and 1958. Some were detonated on land, some underwater, some on offshore barges, and over the years, some locations were bombed multiple times. The map below shows the bomb tests on Enewetak Atoll.

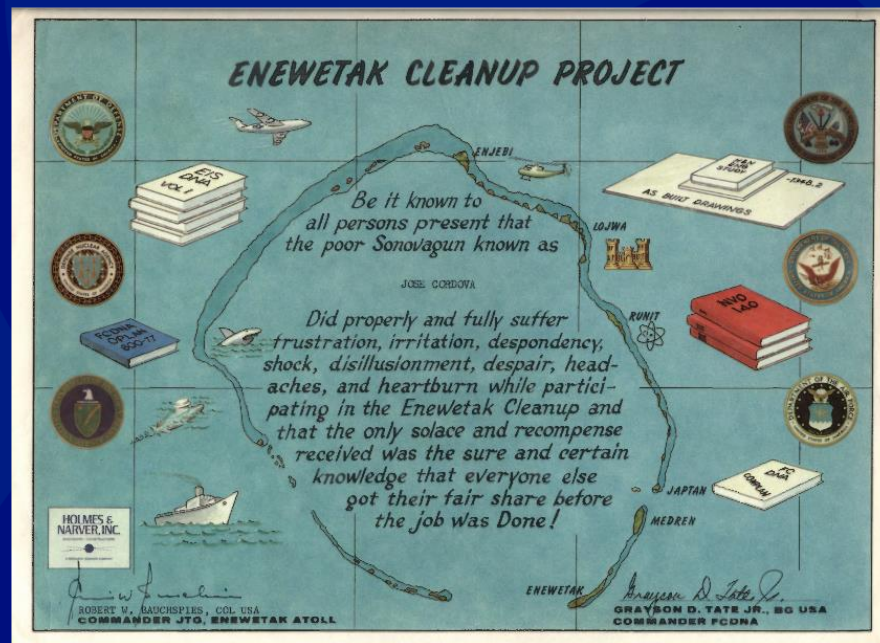


Source: US Dept. of Energy, Enewetak Factbook (1982)

Mashable



1977: Cleanup of **Enewetak** begins.



Cactus Crater





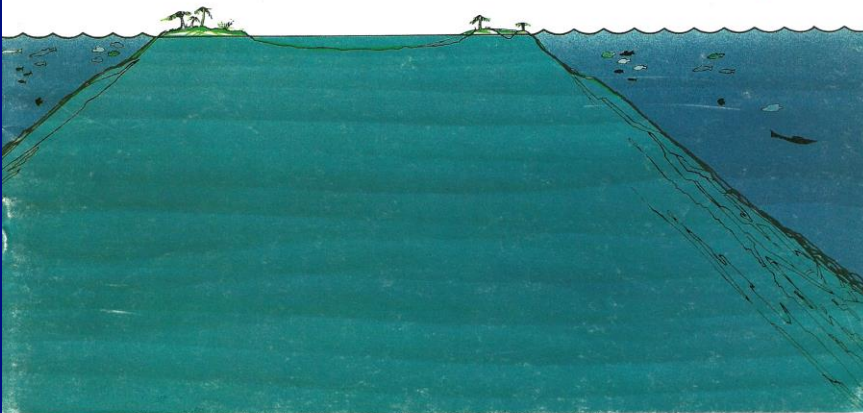
Returned to live on the land which
God ordained that we should live.





Ailin in ENEWETAK Rainin

The ENEWETAK Atoll Today



- 1979: Marshallese write their own constitution.
- 1980: DOE publishes native language guide on environmental conditions. Partial return of Enewetak people to their atoll.
- 1983: U.S. and the Marshall Islands sign Compact of Free Association.
- 1986: U.S. formally ends its United Nations Strategic Trust.
- 1990: The United Nations formally agrees.

The Last Hurrah



Enewetak Island

























Washington, D.C. July 1994 Commission on Human Radiation Experimentation



Senator Tony A. de Brum: member of Marshall Islands Parliament.

“The Marshall Islands has never received adequate answers from the U.S., and as a result, the Marshallese citizens today still fear the unknown consequences of being exposed to radiation.”





Harold and 55-pound barracuda.

A collage of six small images at the top: a man holding a large fish, a person fishing from a boat, two men with fishing gear, a close-up of a fish, a large fish being held, and a group of people on a boat. To the right of the main text is a large image of a coral atoll with a long, straight road or path leading into the water.

Let's Go Fishing in the Marshall Islands!

With its 29 coral atolls spread out over 750,000 square miles of tropical Pacific Ocean, the Marshall Islands is literally one of the fishiest countries on Earth!

Marshall Islands Quick Facts
The Republic of the Marshall Islands (RMI) is a democratic nation with a free association political relationship with the US. The RMI is made up of two roughly parallel atoll archipelagos in the central-north Pacific Ocean. The RMI has approximately 50,000 people, most of which live on Majuro and Kwajalein atolls.

Fishing Techniques
The RMI offers an incredible array of fishing opportunities. Anglers can enjoy flyfishing, jigging, bottom fishing, trolling, casting/whipping, and more.

Fish Species
There are over 1,000 species of open-ocean, deep sea, and reef fish in the RMI. These include the most prized sport fish: blue marlin, sailfish, yellowfin tuna (and other types), wahoo, mahimahi, barracuda, bonefish, snappers, groupers, trevally, and much more.

(continued on back)

A photograph of a man wearing a white t-shirt with "Marshall Islands" printed on it and a baseball cap. He is smiling and holding a large, silver fish (likely a barracuda or similar species) with both hands. The background shows the ocean and a boat.